

AMENDMENT UNDER 37 C.F.R §1.115  
U.S. Application No. 08/067797

IN THE SPECIFICATION:

Page 19, line 14, following "progeny.", please add the following, -- IGI887J0 and IGI887J2 were deposited at the American Type Culture Collection, Rockville, MD on 13 June 1989 under accession numbers 66270 and 66272, respectively. --

IN THE CLAIMS:

Kindly cancel claim <sup>20</sup>28 and substitute therefor the following new claim <sup>21</sup>29. -

C -- <sup>21</sup>29. Phaffia strain IGI887J0. --

Kindly add the following new claims.

C -- <sup>22</sup>30. A mutant strain of Phaffia IGI887J0 of claim 29 which produces at least 700  $\mu$ g of astaxanthin per gram dry weight of Phaffia per six day culture period in YM medium, wherein said astaxanthin is determined by measuring the absorbance at 474 nanometers of a petroleum ether extract of Phaffia using a 1% (w/v) extinction coefficient in a 1 centimeter cuvette of 2100.

C <sup>23</sup>31. Phaffia strain IGI887J2.

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~~32.~~ 32. A mutant strain of Phaffia IGI887J2 of Claim 31 which produces at least 700  $\mu\text{g}$  of astaxanthin per gram dry weight of Phaffia per six day culture period in YM medium, wherein said astaxanthin is determined by measuring the absorbance at 474 nanometers of a petroleum ether extract of Phaffia using a 1% (w/v) extinction coefficient in a one centimeter cuvette of 2100.

33. *An astaxanthin-over producing rhodospirillum rubrum*  
[A pigment mutant] Phaffia producing more than 700 micrograms of astaxanthin per gram of dry yeast per six-day culture in YM medium, wherein the amount of astaxanthin is determined by measuring the absorbance at 474 nanometers of a petroleum ether extract of Phaffia using a 1% (w/v) extinction coefficient in a one centimeter cuvette of 2100. *astaxanthin showing 67-315*

34. The mutant yeast of claim 33, wherein said mutant yeast produces more than 900  $\mu\text{g}$  of astaxanthin per gram of dry yeast.

35. The mutant yeast of claim 34, wherein said mutant yeast produces more than 1100  $\mu\text{g}$  of astaxanthin per gram of dry yeast.

36. The mutant yeast of claim 35, wherein said mutant yeast produces more than 1400  $\mu\text{g}$  of astaxanthin per gram of dry yeast.

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29 37. The mutant yeast of claim 36, wherein said mutant yeast produces more than 1700  $\mu$ g of astaxanthin per gram of dry yeast.

30 38. The mutant yeast of claim 33, wherein said mutant yeast produces astaxanthin at a level at least two times that of naturally occurring Phaffia.

31 39. The mutant yeast of claim 38, wherein said mutant yeast produces astaxanthin at a level at least three times that of naturally occurring Phaffia.

32 40. The mutant yeast of claim 39, wherein said mutant yeast produces astaxanthin at a level at least four times that of naturally occurring Phaffia.

33 41. The mutant yeast of claim 40, wherein said mutant yeast produces astaxanthin at a level at least five times that of naturally occurring Phaffia.

34 42. The mutant yeast of claim 41, wherein said mutant yeast produces astaxanthin at a level at least six times that of naturally occurring Phaffia. --